

Design and Development of a Website in Support of a National User Resource

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Abstract

Websites are essential as remote experimentation becomes more accessible. Particularly, the Macromolecular Crystallography (MC) Group, a subdivision of the Structural Molecular Biology Group at the Stanford Synchrotron Radiation Lightsource (SSRL), has already transitioned their experiment, protein crystallography, to a completely automated experience. An experiment aimed to outline the underlying structure of proteins to understand their function better as it relates to humans and human health. As their technology advanced, the ability to remove travel costs and increase convenience for their users grew, in turn, providing an influx of new scientists seeking to utilize their resources and facilities. In this paper, we examine, specifically, the website the MC group employs to accommodate remote access to their users. This paper will also serve to answer why modernization of websites is needed as time progresses. We will discuss a brief history of website design and its impression on our methods, the software, and the skills required to accomplish our tasks accurately and display the results of our stylistic decisions. Some topics include content management systems such as Backdrop CMS, a fork of Drupal 7, which focuses on content management and website development. While other topics are Markup languages such as HTML and CSS, which will serve as organization and styling on a webpage, respectively. Our results will touch on the material transferred from the outdated website to the current one and describe three CSS-focused projects presently rendered on the website.